

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 24 (Canceled)

25. (Currently Amended) A surface inspection apparatus comprising:

a light source section for emitting a first luminous flux and a second luminous flux irradiated on the surface of an inspected object;

a first irradiation optical system in which the first luminous flux is irradiated on the surface of ~~an~~ the inspected object at a first irradiation angle;

a second irradiation optical system in which the second luminous flux is irradiated on the surface of ~~an~~ the inspected object at a second irradiation angle different from the first irradiation angle;

a displacement section for relatively displacing ~~an~~ the inspected object and irradiation luminous fluxes of the first and second irradiation optical systems;

a light receiving optical system for receiving scattered light of the first luminous flux irradiated by the first irradiation optical system and produced from an inspection object on the surface of ~~an~~ the inspected object and scattered light of the second luminous flux irradiated by the second irradiation optical system and produced from an inspection object on the surface of ~~an~~ the inspected object;

a first light receiving section for converting scattered light of the first luminous flux received by the light receiving optical system into a first light receiving signal;

a second light receiving section for converting scattered light of the second luminous flux received by the light receiving optical system into a second light receiving signal; and

a signal forming section for forming a measuring data including the positions of foreign matters on the basis of the first light receiving signal and the second light receiving signal,

wherein the first light receiving section and the second light receiving section respectively form the first light receiving signal and the second light receiving signal which are different in sensitivity or dynamic range from each other,

wherein, in case that data of foreign matter of the first light receiving signal and data of foreign matter of the second light receiving signal exist in a predetermined range, the signal forming section forms data of foreign matter as same foreign matter on the basis of the first light receiving signal and the second light receiving signal.

26. (Currently Amended) A surface inspection apparatus comprising:

a light source section for emitting a luminous flux irradiated on the surface of an inspected object;

an irradiation optical system for irradiating a luminous flux on the surface of ~~an~~ the inspected object at a fixed irradiation angle;

a displacement section for relatively displacing ~~an~~ the inspected object and an irradiation luminous flux of the irradiation optical system;

a first light receiving optical system for receiving a first scattered light in a first scattering direction irradiated by the irradiation optical system and emitted from an inspection object on the surface of ~~an~~ the inspected object;

a second light receiving optical system for receiving a second scattered light in a second scattering direction irradiated by the irradiation optical system and emitted from an inspection object on the surface of ~~an~~ the inspected object;

a first light receiving section for converting the first scattered light received by the first light receiving optical system into a first light receiving signal;

a second light receiving section for converting the second scattered light received by the second light receiving optical system into a second light receiving signal; and

a signal forming section for synthesizing the first light receiving signal and the second light receiving signal to thereby form a measuring signal,

wherein the first light receiving section and the second light receiving section respectively form the first light receiving signal and the second light receiving signal which are different in sensitivity or dynamic range from each other,

wherein, in case that data of foreign matter of the first light receiving signal and data of foreign matter of the second light receiving signal exist in a predetermined range, the signal forming section forms data of foreign matter as same foreign matter on the basis of the first light receiving signal and the second light receiving signal.

27. (Currently Amended) A surface inspection apparatus according to claim 25, wherein the signal forming section for forming data of scattered strength and detection size of foreign matter as ~~the~~ a measuring data of foreign matters, which contained in ~~the~~ a low sensitivity side scattered data to have been regarded to have coincided with the coordinate of ~~the~~ a saturated high sensitivity side scattered data are registered in data as the scattered strength and detection size of ~~[[a]]~~ the measuring signal in coordinate thereof.

28. (Currently Amended) A surface inspection apparatus according to claim 25, wherein, even where devices different in sensitivity and devices arranged for different objects are used, the measuring ~~data~~ signal can be used in continuous dynamic range.

29. (Currently Amended) A surface inspection apparatus comprising:

a light emitting means for emitting a first luminous flux and a second luminous flux for irradiating on the surface of an inspected object;

a first irradiation means for irradiating the first luminous flux on the surface of ~~an~~ the inspected object at a first irradiation angle;

a second irradiation means for irradiating the second luminous flux on the surface of ~~an~~ the inspected object at a second irradiation angle different from the first irradiation angle;

a displacement means for relatively displacing ~~an~~ the inspected object and irradiation luminous fluxes of the first and second irradiation means;

a light receiving means for receiving scattered light of the first luminous flux irradiated by the first irradiation means and produced from an inspection object on the surface of ~~an~~ the inspected object, and scattered light of the second luminous flux irradiated by the second irradiation means and produced from an inspection object on the surface of ~~an~~ the inspected object;

a first conversion means for converting scattered light of the first luminous flux received by the light receiving means into a first light receiving signal;

a second conversion means for converting scattered light of the second luminous flux received by the light receiving means into a second light receiving signal; and

a signal forming means for forming a measuring signal on the basis of the first light receiving signal and the second light receiving signal,

wherein the first light receiving section and the second light receiving section respectively form the first light receiving signal and the second light receiving signal which are different in sensitivity or dynamic range from each other,

wherein, in case that data of foreign matter of the first light receiving signal and data of foreign matter of the second light receiving signal exist in a predetermined range, the signal forming section forms data of foreign matter as same foreign matter on the basis of the first light receiving signal and the second light receiving signal.

30. (Currently Amended) A surface inspection apparatus comprising:

a light emitting means for emitting a luminous flux for irradiating on the surface of an inspected object;

an irradiating means for irradiating a luminous flux on the surface of ~~an~~ the inspected object at a fixed irradiation angle;

a displacement means for relatively displacing ~~an~~ the inspected object and ~~an~~ the irradiation luminous flux of the ~~irradiation~~ irradiating means;

a first light receiving means for receiving a first scattered light in a first scattering direction irradiated by the ~~irradiation~~ irradiating means and produced from an inspection object on the surface of ~~an~~ the inspected object;

a second light receiving means for receiving a second scattered light in a second scattering direction irradiated by the ~~irradiation~~ irradiating means and produced from an inspection object on the surface of ~~an~~ the inspected object;

a first conversion means for converting the first scattered light received by the first light receiving means into a first light receiving signal;

a second conversion means for converting the second scattered light received by the second light receiving means into a second light receiving signal; and

a signal forming means for forming a measuring signal by synthesizing the first light receiving signal and the second light receiving signal,

wherein the first light receiving section and the second light receiving section respectively form the first light receiving signal and the second light receiving signal which are different in sensitivity or dynamic range from each other,

wherein, in case that data of foreign matter of the first light receiving signal and data of foreign matter of the second light receiving signal exist in a predetermined range, the signal forming section forms data of foreign matter as same foreign matter on the basis of the first light receiving signal and the second light receiving signal.

31. (Currently Amended) A surface inspection apparatus according to claim 30, wherein the signal forming means for forming data of scattered strength and detection size of foreign matter as the measuring ~~data~~ signal of foreign matters, which contained in ~~the~~ a low sensitivity side scattered data to have been regarded to have coincided with ~~the~~ coordinate of the saturated high sensitivity side scattered data are registered in data as ~~the~~ a scattered strength and detection size of ~~[[a]]~~ the measuring signal in coordinate thereof.

32. (Previously Presented) A surface inspection apparatus according to claim 30, wherein, even where devices different in sensitivity and devices arranged for different objects are used, the measuring data can be used in continuous dynamic range.